



SOURCE: FOREST CITY ZONING PETITION/KLING STUBBINS

**A new life sciences and office building at 300 Mass. Ave. next to Random Hall, to be occupied by Millennium Pharmaceuticals**, pictured above. The city council's vote to approve the building was postponed to Aug. 6. Some have opposed the proposal, citing the building's height and lack of housing. See article, page 16.

# UC Berkeley joins edX initiative

7 MITx, HarvardX, BerkeleyX classes offered in fall 2012

**By Stephanie Holden**  
ASSOCIATE NEWS EDITOR

On July 24, University of California, Berkeley joined edX — the online education venture started by MIT and Harvard University — and will offer online classes in the fall. MIT has billed edX as an open platform that universities can use to improve their on-campus education and simultaneously make courses available to worldwide audiences. There are seven classes set to be offered for fall 2012, including BerkeleyX courses “Software as a Service” and “Artificial Intelligence.” Berkeley professor Dan Klein

will be one of the instructors for “Artificial Intelligence.” In the seven years that he has been teaching at Berkeley, the class has grown to over 300 students. This increase has forced him to automate parts of the curriculum, such as implementing automatic feedback and online collaboration for projects. Despite this development, he understands that there are both strengths and weaknesses in bringing material to the Internet. “Lectures online do trade the immediacy of live lecture for the careful crafting that comes from packaging and editing, so it's a lot like how movies compare to



live theater: each medium has its strengths. Another aspect of that comparison that's worth making is that if you just film live theater, you get the worst of both worlds — it's neither immediate nor edited — so online lectures do require a very different skill set to do well,” wrote Klein in an email to *The Tech*.

edX, Page 7

## IN SHORT

**Time to move!** Summer housing for students without a fall assignment ends Aug. 12 and students with a fall assignment can move into their rooms Aug. 14 – 15. Early returns can move in Aug. 16.

**The Hubway Bicycle Sharing program comes to Cambridge!** There will be a station outside Building 9 by next Wednesday. Two stations were installed in Central Square on Monday.

**The first members of the Class of 2016** will start to arrive on campus on Aug. 21 for their FPOPs!

**Zagat, the restaurant critic publisher, is hosting a pop-up lounge** in Central Square at 579 Mass. Ave. Stop by to take a survey and get a free drink.

**This is *The Tech's* last summer issue!** We resume our twice weekly publication schedule on Aug. 24.

**Send news information and tips to [news@tech.mit.edu](mailto:news@tech.mit.edu).**

# Sloan buzzing with start-ups during summer

Beehive Cooperative start-up incubator houses 40 MIT-affiliated startups in E52

**By Amita Gupta**

In mid-May, when second-year Sloan student Philip Cohen visited the nearly 5000 square feet of space on the fifth floor of E52 that would later host 40 start-up companies, the only furniture over there was a 1970s style leather massage arm chair. By June 4, 14 offices and a common area with five large tables had emerged to host the teams until Aug. 31.

This transformation into the Beehive Cooperative — MIT's largest start up incubator — represented a dire need at MIT. Earlier this year, the Martin Trust Center for MIT Entrepreneurship received over 100 applications for their Founders' Skills Accelerator (FSA) Contest which provided 10 MIT-affiliated start-up companies with \$20,000 to pursue their projects.

Bill Aulet, managing director of the Trust Center, tapped Cohen on the shoulder one day while walking out of his “New Enterprises” class,

telling him about the space.

“From Day One, he was extremely supportive saying take this and run with it,” says Cohen. From here, the Beehive Cooperative was formulated. An application was put up on the Trust Center website with a May 23 deadline and sent to “virtually every outlet at MIT.”

Of the approximately 55 companies which applied, Cohen chose about 40 using two criteria — each team needed to have a high level of seriousness with regard to their project and at least one current MIT student on its founding team.

An English major, a former military officer who oversaw 250 people right out of college, and an avid musician who released an indie-rock album last fall, Cohen wanted a diverse set of companies and to ensure the Beehive was “not just a Sloan thing.”

He got what he wanted. From Delightfully, which provides digital giftwrapping services, to Jamela, an organic make-up company, Co-



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**The Beehive Cooperative is a startup incubator located in E52** that houses and supports over 40 MIT-affiliated entrepreneurial teams.

hen sat down informally with each team to better understand their unique goals.

With a kick-off pizza lunch on

June 4, the bees got to work. On one chalkboard there, the phrase

Beehive, Page 15

## STUDENT INPUT ON RLADS

Collins listens to MacGregor students' concerns about their RLAD. **OPINION, p. 4**

## AWAITING THE START OF MIT

A prefrash eagerly anticipates all that MIT can be. **CAMPUS LIFE, p. 13**

## FOOD AS FOREIGN POLICY

Does The Helmand's food match U.S foreign policy? **ARTS, p. 8**



## NERDS, NERDS, EVERYWHERE!

Two MIT students venture into nerd heaven and obsess over *Firefly*. **COMIC-CON, p. 9**

## TOO MANY ATTACK ADS

Political campaigns should focus more on the positives. **OPINION p. 5**

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Julian Castro, the Democratic mayor of San Antonio, will deliver the keynote speech at his party's national convention in September, taking the role that vaulted Barack Obama to national prominence eight years ago.

—Michael D. Shear, *The New York Times*

—Choe Sang-Hun, *The New York Times*

—Christine Haughney, *The New York Times*

THE NEW YORK TIMES

If the frequency slows down because demand exceeds supply, relays will shut down power lines or transformers, to protect the system, he said, but if they cut off too much load, frequency will bounce back at too high a level, leading to a disturbance that propagates through the system.

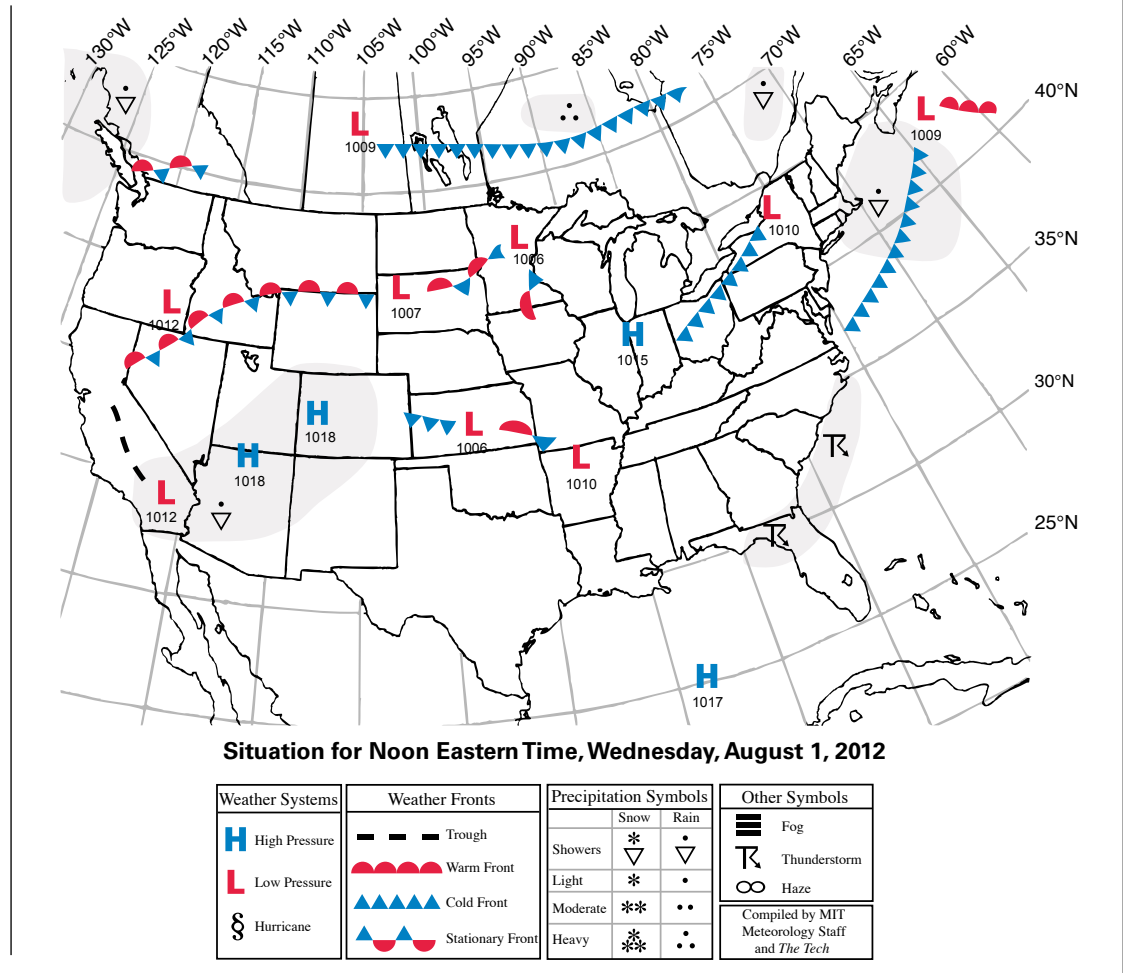
THE NEW YORK TIMES

"Romney likes to sound tougher on Iran, but when you really delve into the specifics, there's not a lot of difference there from what the administration has done or is already doing," said Colin H. Kahl, a former Pentagon official who is an adviser to the Obama campaign. "A lot of this is Romney describing our current policy and masquerading it as criticism of the president."

### STAFF METEOROLOGIST

weather looks to persist for the rest of this week. There will be clouds today and tomorrow with about a 1/3 chance of rain each day. Highs today and Thursday will be in the mid 80s, which are only slightly above average for this time of year. Friday looks to be sunnier and warmer, with a high around 90°F. Temperatures should drop a little by the weekend as a few more clouds roll in.

**Saturday:** Clouds and sun. Highs in the mid 80s. Chance of showers at night with a low near 70°F.

















# Students, housemasters, GRTs interview RLADs

*Students placed in small, non-dormitory-affiliated groups for the interview process*

RLADs, from Page 1

made the interview process kind of difficult at times.”

The official RLAD job description, which was released on July 23, states that the RLADs’ responsibilities will include working to promote a sense of community and belonging, following up with residents on “medical, psychological, and personal issues” and provide updates to house teams and to the Department of Student Life (DSL), and to “support the housemasters in their roles as the supervisors of the GRTs.”

The job description also listed the minimum qualifications of RLADs are a Master’s Degree in the field of Education Counseling, a “minimum 3 – 5 years of full-time experience in Residential Life/Student Affairs Life work,” and other experiences. Administrators have emphasized these stringent requirements both in communications with the *Tech* and various stakeholders.

According to their LinkedIn profiles, two of the newly announced RLADs had only graduated from their Master’s Programs in 2010 and 2012, respectively. The earliest Master’s Degree graduation date of any of the RLADs is 2009.

Following the interviews, the students were asked to fill out written evaluations of the candidates. They responded to three questions: (1) “What are the candidate’s strengths as they relate to the Area Director position?” (2) “What are their areas of improvement as you view them?” and (3) “Given your knowledge of your house’s community, would the candidate be a good fit? Why or why not?” The students could also place each candidate into one of three categories: “definitely consider, superior candidate”; “consider, strong candidate”; and “do not consider.”

Humphreys said that the recommendations were surprisingly consistent from group to group; a few candidates were eliminated due to a lack of strong references, and then the hiring decisions were made based on rankings extrapolated from the response sheets. Humphreys said that he and other members of the DSL then worked to determine candidates’ ranking within individual houses, after which he discussed and confirmed the determined placements with housemasters from each residence.

Humphreys said that he was surprised that different residences had distinctly different preferences. Elizabeth W. Santorella ’13, a representative from McGreggor, said that it seemed like houses were seeking out different qualities. “I noticed some differences

in how involved and outgoing they wanted the RLAD to be,” she said, adding that MacGregor was particularly looking for someone who would respect student privacy but also be available to provide student support.

As such, Humphreys said that DSL was able to match each residence with one of their top preferences. Students from McCormick, Next, MacGregor, and Simmons confirmed that the placements in their residences did align with the recommendations given by their houses.

**Humphreys said that the recommendations were surprisingly consistent from group to group.**

Ross, Santorella, DormCon President Edward Mugica ’13, and Linda M. Seymour ’14, a representative from Next House, said that students in each residence collaborated with their housemasters — and in some cases GRTs — to submit preferences. However, this was not the case in all houses. Jethani said that while the students from McCormick met to talk about their choices for candidates, they did not speak to the housemasters about their recommendations.

**Student concerns**

The announcement that RLADs would join the houseteam was a revelation for both undergraduate students and graduate resident tutors (GRTs). On June 6, a letter from Chancellor Eric Grimson PhD ’80 to the housemasters was leaked to the entire MIT community. Following campus outcry, student and GRT leaders worked with housemasters to address concerns regarding the position. Humphreys said that the motivation behind the creation of the RLAD role was so “that students feel more support, that there is another person they can turn to” and cited the busy schedules of housemasters and GRTs as a reason for the necessity of the position.

Mugica said that he was on the phone with Humphreys immediately following the release of the letter and has been working with the administration in the ensuing process.

After the information about RLADs was leaked, many students expressed concerns over both the process and the position. Mugica said that his biggest concern was “student disengagement.”

“Basically, there’s this idea that students are going to be upset because this was not done appropri-

ately or because they don’t like the position,” Mugica said. “They’re going to walk away from anything that has to do with the RLAD, and since the point is for the area director to be a member of the house team, they’ll walk away from the house team in general.”

Mugica said that another of his main concerns was that, “If the RLAD does not take cues from students and from student governments, their position will not be useful to students and could in the end actually hurt student involvement and student support more than help it.”

Ross said that his primary concern was the effectiveness of having a student support role that was not a clear response to clear student issues, and that was devised without open student involvement. Ross said that he had also heard student concerns that this was “another step in trying to make MIT very standardized or similar to every other college.”

Jonté D. Craighead ’13, president of the Undergraduate Association, said that his main concern is with the process by which the RLAD role was created — not the position itself.

“We have been taking the approach where we see things that are alarming we’ll call them out,” he said, “but to this point I think that there are very few things that we see alarming about the position. Our concerns are more about the process.”

Humphreys and Grimson did not provide specific answers to questions regarding the timeline and process of the role’s creation.

**Student leaders felt that their best option was to work within the situation.**

Despite these concerns, student leaders said that they felt that their best option was to work within the situation that was created in order to ensure further inclusion in the process. Mugica added that “personally, the reason MacGregor decided to move forward, even in light of these concerns, is that we’ve been assured from multiple people — including Dean Humphreys and our housemasters — that the student government will have a very strong input in what the RLADs job will include.”

Another motivation for their respective dormitories’ decision to continue with the RLAD process was because of the alternative, said Ross and Mugica. Without an RLAD and considering the absence of the RLAs, there would be a greater bur-

den on the housemasters.

Still, Mugica emphasized that he had been working with other members of DormCon and the administration to address student concerns, adding that the administration had responded. He said that DormCon specifically raised concerns about the possibility of the RLADs having disciplinary roles, as well as concerns about the non-house specific selection process. He said that while “the administration held that they believed this needed to be an MIT position, and they needed to hire people for MIT and not for an individual dorm ... they did allow us to change the questionnaire that was given to the student and GRT representatives so that there would be more emphasis on whether a candidate fit into that representative’s dorm.”

Mugica also said that he was assured by the administration that the RLADs would not have a disciplinary role in houses and that they were not meant to be a replacement for housemasters. Humphreys confirmed that discipline will not be a job objective of the RLADs, but added “that being said, obviously any MIT employee — housemaster or myself or an area director — if we see any violation of institutional policies or state law, we have an obligation to report that.”

Both Mugica and Craighead emphasized that the effectiveness of the position will depend on the willingness of students to engage with the RLAD and provide feedback as to what support roles they feel are needed. It is extremely important “for people to remember that even if they’re upset about the process or disappointed with the way things were done and turned out, the RLAD is not the person who did this. And they want to work with students,” said Mugica. “If there’s one thing I would request, it would be for students to take their frustrations where they belong, and try to engage with the RLAD and make this a positive change — even if it’s not exactly what they wanted.”

Craighead said that the UA is working on a survey to gauge how students feel about the RLAD role and how they think it will be effective. The UA had originally expected to release the survey two weeks ago.

“We’re basically motivated to run the survey so that the dorm governments have a sense of where their residents stand going into the fall semester on the RLAD issue,” said Craighead, saying that continued student involvement will be necessary for the RLAD role to be effective. He and Mugica both emphasized that if the process of communication and feedback con-

## RLAD PLACEMENT FOR FALL 2012

**Michelle Lessly**  
— Burton-Conner

**Prior position:**  
MIT RLA

**Tamika Smith**  
— MacGregor House

**Prior position:**  
Residence director at Northeastern University

**Lauren Piontkoski**  
— McCormick Hall

**Prior position:**  
Residence Director at Bentley University

**Rebecca Kjaerbye**  
— Maseeh Hall

**Prior position:**  
MIT RLA

**James Reed**  
— New House

**Prior position:**  
Master’s student at Harvard University

**Laurel Dreher**  
— Next House

**Prior position:**  
Coordinator of Residence Education at Roger Williams University

**Joshua Gonzalez**  
— Simmons Hall

**Prior position:**  
Residence Education Coordinator at University of Chicago

tinues to develop, they can see the RLAD role strengthening the support structure in residence halls.

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# MIT professor wins \$3 million

*Guth is 1 of 9 winners of the Fundamental Physics Prize*

By Kenneth Chang  
*THE NEW YORK TIMES*

Physicists are rarely wealthy or famous, but a new prize rewarding research at the field’s cutting edges has made nine of them instant multimillionaires.

The nine are recipients of the Fundamental Physics Prize, established by Yuri Milner. Milner, a Russian physics student who dropped out of graduate school in 1989, earned billions investing in Internet companies like Facebook and Groupon.

“It knocked me off my feet,” said Alan H. Guth PhD ’72, MacVicar Faculty Fellow and professor of physics at MIT, who was among the winners. He came up with the idea of cosmic inflation, that there was a period of extremely rapid expansion in the first instant of the universe.



SOURCE: WIKIPEDIA (BETSYTHEDEVINE)

When he was told of the \$3 million prize, he assumed that the money would be shared among the winners. Not so: Instead, each of this year’s nine recipients will receive \$3 million, the most lucrative academic prize in the world. The Nobel Prize currently comes with an award of \$1.5 million, usually split by two or three people. The Templeton Prize, which honors contributions to understanding spiritual dimensions of life, has been the largest monetary given to an individual, \$1.7 million this year.

The \$3 million has already appeared in Guth’s bank account, one that originally had a balance of \$200. “Suddenly, it said, \$3,000,200,” he said. “The bank charged a \$12 wire transfer fee, but that was easily affordable.”

Milner said he wanted to recognize advances in delving into the deepest mysteries of physics and the universe.

“This intellectual quest to understand the universe really defines us as human beings,” he said.

Four of the physicists work at the Institute for Advanced Study in Princeton, N.J.: Nima Arkani-Hamed, Juan Maldacena, Nathan Seiberg, and Edward Witten. They work on theories trying to tie together the basic particles and forces of the universe, particularly with a mathematical machinery known as string theory.

The other winners are Andrei Linde, a physicist at Stanford who also worked on cosmic inflation; Alexei Kitaev, a professor of physics at the California Institute of Technology who works on quantum computers; Maxim L. Kontsevich, a math-

ematician at the Institute of Advanced Scientific Studies outside Paris whose abstract mathematical findings proved useful to physicists unraveling string theory; and Ashoke Sen, a string theorist at Harish-Chandra Research Institute in India.

Milner personally selected the inaugural group, but future recipients of the Fundamental Physics Prize, to be awarded annually, will be decided by previous winners.

He declined to explain in detail how he selected which accomplishments to honor or why the winners are all men.

“I truly see this as a start,” Milner said. “Going forward, it’s going to be up to the committee to make those considerations.”

According to the rules, the prize in future years may be split among multiple winners, and a researcher will be able to win more than once. Milner also announced that there would be a \$100,000 prize to honor promising young researchers.

Unlike the Nobel in physics, the Fundamental Physics Prize can be awarded to scientists whose ideas have not yet been verified by experiments, which often occurs decades later. Sometimes a radical new idea “really deserves recognition right away because it expands our understanding of at least what is possible,” Milner said.

Arkani-Hamed, for example, has worked on theories about the origin of the Higgs boson, the particle recently discovered at the Large Hadron Collider in Switzerland, and about how that collider could discover new dimensions. None of his theories have been proven yet. He said several were “under strain” because of the new data.

Several of the winners said they hoped that the new prize, with its large cash award, would help raise recognition of physics and draw more students into the field.

“It’ll be great to have this sort of showcase for what’s going on in the subject every year,” Arkani-Hamed said.

The winners said they had not yet decided what to do with their windfall.

“There are some rather mundane things, like paying out the mortgage,” said Kontsevich, who added that he was thinking about putting some of the money into education efforts.

“My success is in large part due to good education, my teachers and the atmosphere of excitement in science when I grew up,” he said. “I might try to help restore this atmosphere as much as I can.” Kontsevich also won a \$1 million mathematics prize this year.

Guth agreed. “I do think prizes like this help put across to the public that fundamental physics is important, and it’s not just heavyweight boxing that’s worthy of prizes,” he said.

But he was going to warn his students not to get the wrong idea. “Certainly, it’s still not a great idea to go into physics for the money,” he said.



CHRISTOPHER A. MAYNOR—THE TECH

**Students began construction on a wooden structure in front of Building 33 last weekend.** The self-supporting structure composed of 2x2 wooden posts will be on display at its current location until November.

## Fall 2012 edX courses mostly CS

edX, from Page 1

Chancellor Robert J. Birgeneau of Berkeley — also former Dean of Science at MIT — said that many people at the institution, from senior leadership members to faculty, have been thinking about internet education for the last couple of years. Stanford President John Hennessy, a good friend of Birgeneau, approached him about a year ago to discuss the possibility of joining Coursera. When the for-profit company was launched, “both MIT and Berkeley ... considered Coursera but for a variety of reasons we decided, separately, that it didn’t meet our needs,” Birgeneau said. He did not wish to discuss those reasons. However, Berkeley does have individual faculty members who are connected with Coursera, and Birgeneau emphasized that senior leadership does not force preferences or opinions on faculty.

MIT Chancellor Eric Grimson has a similar view.

“I prefer not to make specific comparisons to other online offerings, other than to note that it was very important to MIT that at least one option was a not-for-profit one. There will be many different experiments in this space, as different institutions explore options for effective online learning,” Grimson wrote in an email to *The Tech*.

Birgeneau and MIT L. President Rafael Reif, long-time friends, had been in touch as MIT was developing MITx, the new online educational system that evolved into edX. But the formal arrangements for UC Berkeley to join edX were made just a few weeks ago.

“When Rafael [Reif] announced MITx and the edX partnership with Harvard, we looked at their mission

statement and we got very excited about edX,” Birgeneau said. “I called up Rafael and ended up having a conversation with him about Berkeley joining them, since their vision for online education was consonant with ours.”

### Financial contributions to edX

As the founding universities of edX, MIT and Harvard both contributed \$30 million toward the project. At this time, Berkeley will not be matching this contribution, but will lead the to-be-formed “X Universities” consortium.

### Klein affirmed that tools used in online courses have and will continue to improve feedback and learning.

“It’s just not financially possible for us at this time in history,” said Birgeneau. “We are providing technical expertise — we have faculty at Berkeley who are top in computer science, and we think we can really make a contribution on the technical side for the platform.” Birgeneau also said that as a large public university on the West coast, they will help draw people from around the country to the edX platform, and in particular draw people from the large number of community colleges in California.

### Exploring teaching technology

Both MIT and Berkeley leaders have said that the development of massive open online courses, or MOOCs, will

not only help spread education globally, but will also enhance on-campus education at universities.

“We plan to explore a range of experiments in using online technology to enhance our residential-based experiences; from flipped classrooms,” — where students are instructed by online videos outside of class, and teachers guide interactive activities in class — “to online immediate student assessment and feedback, to online discussion groups, to other experiments,” Grimson said. “The results will guide future development of subjects.”

Klein affirmed that tools used in online courses, such as autograders, have and will continue to improve feedback and learning. He also believes that online discussion forums “allow great conversations to flourish about course material — conversations that used to be confined to office hours.”

Birgeneau added that “one way that Berkeley complements MIT is that we have a strong humanities program — we have more people in humanities at Berkeley than in physical sciences. One of the really interesting things will be to figure out how to offer humanities, like a course in Shakespeare, online. The focus of edX so far has been dominated by computer scientists. We want it to become much richer and much broader.”

Courses offered in the fall also include options like 6.002x Circuits and Electronics (MITx) and PH207x Health in Numbers (HarvardX). 6.002x was pilot course launched by MITx in December 2011, with over 150,000 people registered worldwide. Those interested in learning more about edX or signing up for a course can visit the website online at <https://www.edx.org/>.



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## RESTAURANT REVIEW

# The good war?

## Fine, but not exotic, dining at The Helmand

**By Keith A. Yost**  
*STAFF WRITER*

Are we going to invade Britain any time soon? Of course not, their food is terrible. Are we going to invade Canada? Why would we? We already have Taco Bell.

But is it possible we'll invade some foreign, exotic country whose dishes you've never eaten before? Yes.

Somewhere in the bowels of the Pentagon, a young neocon yearns for the taste of an unfamiliar dish, and it is only a matter of time before this yearning manifests itself on the world stage.

U.S. troop presence.

If there is one thing the Bush Era accomplished, it is to associate the neoconservative school of foreign policy with warmongering and empire. Perhaps the hawkish reputation of neocons is well-deserved — it is, after all, hard to otherwise categorize a set of thinkers who believe both that American primacy is the best path toward national security, and that primacy is best preserved by active involvement and intervention in affairs abroad.

Nonetheless, whether the popular conception of neocons is deserved or not, it's clear that neoconservatism has not done itself any favors by exchanging its former standard bearers (e.g. Francis Fukuyama), for the new lot (e.g. Paul Wolfowitz). Where the former focused on democratic movements, the latter emphasizes troop movements — even if one believes these two to be sides of the same coin, the public relations fallout from putting the worse foot forward is undeniable.

The neoconservative school is in dire need of a reboot. So, I write today with a bit of revisionist history. I come with an excuse for the mistakes of the past, and a new, potent theory for understanding why and how the United States chooses to involve itself abroad. Here it is:

Neocons aren't inherently hawkish. They are just misunderstood, hardcore foodies.

In my hometown of Fresno, there is a very large population of Hmong, an Asian ethnic group hailing from southeast Asia. Most of this population is descended from refugees who fled after having fought on the losing side in Vietnam and Laos. And while the wars they fought in and the loss-

es they suffered were tragic, they were unquestionably a boon for the gastronomes of central California. Where before a Fresnoan might have had to pay a small fortune to obtain authentic Hmong cuisine, now it's just a short walk away.

It might be more “traditional” to judge the wisdom of a conflict based upon the geopolitical goals it accomplished or failed to deliver. And if you judged the war in Vietnam by such a limited metric, then sure, you might chalk it up as a loss. But neoconservatives have transcended this parochial sort of accounting. They see the bigger picture — they understand that in the long run, diversity is the real strength of the American nation, and war’s capacity to enrich that diversity, particularly its capacity to enrich the food supply, is at the heart of our national interests.

**I am sad to report that The Helmand's food is not enough to make the United States' foreign policy in Afghanistan a success.**

The Helmand, all things considered, is an excellent restaurant. For the price (in the area of \$30 per person), it delivers a meal that compares well with any other option in Boston. The lamb was tender, the rice was tasty, the bread came with delicious dipping sauces ... it was a meal I

## The Helmand

**143 First Street,  
Cambridge**

**Dinner: Sunday – Thursday  
5 – 10 p.m., Friday –  
Saturday 5 – 11 p.m.**

would very happily have again.

However, the reason I came to the Helmand was not to see if the food was good — I came to see if it delivered an epicurean experience that was novel and exciting enough to justify the blood and treasure spent abroad. And I am sad to report that The Helmand is not enough to make our foreign policy in Afghanistan a success.

The kaddo (a baked, candied pumpkin dish) was both excellent and new, and the ambience of the place as a whole was also different in a good way, but there the novelty ends. In hindsight, my conclusion is unsurprising: Afghani cuisine is not far removed from that of either Pakistan or India. If you come to The Helmand expecting anything more than a variation on south Asian dishes, you will likely come away disappointed.

If you are looking for a place that will give you your money's worth in fine dining, The Helmand certainly deserves your attention. I recommend the same meal I had: kaddo, lamb, and as much of the amazing free bread as you can eat while retaining your dignity. But if you are looking for a new hot thing in the culinary world, maybe your time would be better spent at home, working on withdrawal timetables.

**The lamb was tender,  
the rice was tasty,  
the bread came with  
delicious dipping  
sauces... it was a  
meal I'd happily have  
again.**

Armed with this powerful new model of foreign relations, I set out to settle an open question in the foreign policy world: Was the war in Afghanistan a good idea? Was the juice worth the squeeze? And what better place to put the War in Afghanistan to the test than The Helmand. Owned by Mahmood Karzai, brother of President Karzai himself, The Helmand is clearly an official bid to earn the succor of wavering foreign policy wonks who now doubt whether Afghanistan deserves a continued



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Comic-Con attendees rifle through discounted comics on the expo floor.

The Tech explores...

SAN DIEGO

COMIC CON

INTERNATIONAL

- PAGES 8-9  
COMIC-CON IN PHOTOS ➔
- PAGE 10  
WAITING FOR FIREFLY ➔
- BELOW  
COMICS OF COMIC-CON ⬇

By Connor Kirschbaum and Jessica J. Pourian  
EDITORS

# COMICS OF COMIC-CON

Surprisingly, one of the most neglected aspects of Comic-Con is, well, the comics! With the overwhelming Hollywood presence on the show floor and in the panels, it is easy to forget the backbone of everyone’s favorite pop culture convention. We wandered the booths looking for comics to take home; here are some of our favorites.

reMIND

by Jason Brubaker

One of the pleasures of San Diego Comic-Con is walking around the small press tables and meeting artists you’ve never heard of, and that is exactly where we found Jason Brubaker and his lovely, self-published graphic novel, *reMIND*.

With its gorgeous art, perfectly placed panels, and full page spreads, *reMIND* is one of the most visually impressive comic books I’ve ever read. The colors are vivid, the characters detailed, and the entire book is packaged in a pleasing hardback

that feels true to the company name (Coffee Table Comics).

The story follows lighthouse keeper Sonja and her cat Victuals, who — after having gone missing for a few days — returns with the ability to speak. He tells Sonja that he is from a different world, and she becomes determined to help him return. As the two delve into the circumstances surrounding his disappearance, more and more mysteries are unveiled while the reader is taken on a fantastical journey.

In its brief 151 pages, you get a clear sense of Victual’s quirky personality and become immersed in the fantastical setting of the story. You’ll be rooting for the kitty in no time, and shocked when you reach the cliffhanging end. *reMIND* leaves you wanting more, and fortunately fans can read the next couple chapters and donate to the Kickstarter for printing the second book online at <http://www.remindblog.com/>. The site updates every Monday, and the entire series is free online.

Ubu-Bubu

by Jamie Smart

Gun-Fu

by Howard Shum

Fat Animals

by D. Shazzbaa Bennett

One of my favorite items we came across on the con floor was a charming little volume demurely labeled “Fat Animals Colouring Book.” I opened it and discovered a coloring book full of delightfully chubby animals. The drawings are absolutely adorable, and the purchase came with free crayons. Talk about a win-win! Too bad I haven’t improved at coloring inside the lines since I was a child... You can visit the author’s website at <http://shazzbaa.com>.





San Diego Comic-Con International is an annual four-day celebration of the popular arts, that draws over 130,000 attendees from around the world. Originally started in 1970 as a comic book convention, the focus of the Con has since shifted from comic books to everything pop culture, from blockbusters and video games to the latest science fiction and fantasy novels. Some fans make the pilgrimage to see the people who create their favorite media, others to stock up on rare comic books or to spend thousands on the gigantic exhibition floor. Some people just come for the crowds.

San Diego Comic-Con is the third largest comic convention in the world (after Japan's Comiket, which hosts 500,000 attendees, and France's Angoulême, which hosts 220,000). Tickets for this year's convention sold out within 90 minutes of becoming available

online in April. Comic-Con runs for four days, Thursday through Sunday, with an additional night on Wednesday from 6 to 9 p.m. for professionals and attendees with four day passes. *The Tech* attended this year's con as press.

What is perhaps most striking about San Diego Comic-Con is not the vast amount of merchandise nor the celebrity presence, but the intense feeling of camaraderie that pervades the entire show. Whether it's waiting in line with the same folks for 10 hours to see the Firefly panel or just standing around the corners of the show floor, one of the most impressive things about the con is the feeling of community. Strangers are happy to strike up a conversation in line, compliment a passing attendee's t-shirt, or take a photo of a family struggling with a self-portrait. It is truly a gathering place for nerds of all kinds.



A convention-goer shows off her replica of Chell's Long Fall Boots from *Portal 2*.



At the Lego Booth, a Darth Maul Lego sculpture stands ready to attack!



After hours of waiting in line, fans begin to move towards Ballroom 20 to see the cast and creators of television shows *Community*, *Legend of Korra*, and *Firefly*.

It's hard to communicate exactly how many people 130,000 really is. It's not until you're used to being shoved side to side when walking, and expect a ten yard walk to take 15 minutes, that it really starts to click. There are serious lines for everything — from pretzels to bathrooms to t-shirts — and they can take hours. The lines for official Comic-Con t-shirts took us upwards of 90 minutes — and that was after waiting in a line to get in line!



Joel McHale addresses the audience at the *Community* panel



A Predator sculpture terrorizes the convention floor.



Convention-goers flood the expo floor on preview night, the start of Comic-Con.



A stormtrooper holds a convention-goer hostage for the paparazzi.



A sculpture of Spike Spiegel from *Cowboy Bebop*.



Cosplayers dressed as Amon and Chief Lin Beifong from *The Legend of Korra* pose for the camera.



The Atlas Portal Gun on display at Comic-Con. The replica was sold out by as early as 9:40 a.m.



Cosplayers dressed as Amon and Chief Lin Beifong from *The Legend of Korra* pose for the camera.



Convention-goers dress as Earthworm Jim and Kick-Ass.



A mural on Comic-Con's expo floor features Cartoon Network characters old and new.



The San Diego Convention Center, which has been the venue for Comic-Con since 1991.



An anthropomorphic saber-tooth tiger growls at passerby at Comic-Con.



A zombie cosplayer roams the halls of the San Diego Convention Center.

One of the most well-known Comic-Con events is the annual Masquerade, which takes place on Saturday night in Ballroom 20. Costume designers spend months developing elaborate and sometimes technical costumes and props, portraying characters from comic books, movies or video games. Their work is unveiled on stage to thousands of Comic-Con attendees, often with an accompanying skit. We particularly enjoyed the Mortal Kombat/Cinderella mashup, which ended up taking the most awards that night. The masquerade is doubly entertaining because before every contestant, the audience calls out the contestant number "twenty eight!" followed by "ha ha ha" and more and more additions as the night progresses. By the end of the show, every number was followed by "Ha ha ha, woowo, yeah, awesome! REDO" and more, much to the chagrin of the MCs.

One of the draws of Comic-Con is the number of exclusive items that are for sale there. Fans line up for the exhibit hall (which opens at 9:30 a.m.), hours in advance for a chance to be one of the first people in line for whatever exclusive item their heart desires.

Our favorite? The Atlas Portal Gun, limited to 100 sales per day. We waited in line twice to nab one, and were turned away both times (they sold out by 9:40 a.m.).

Another popular pick was the Hasbro-made toy of the helicopter from *Avengers*, which served as the inspiration for a *Penny Arcade* comic strip during the con.





Fans await Comic-Con panels featuring the cast and creators of television shows *Community*, *Legend of Korra*, and *Firefly*.

# SIT THE LINE

The road to *Firefly*’s 10-year reunion panel

By Connor Kirschbaum  
MANAGING EDITOR

On day one of San Diego Comic-Con International, our Google calendar was a naively tight grid of panels. The plan was to bounce between Hall H (capacity: 6130 people) and Ballroom 20 (capacity: 4908 people), leaving just enough space in our schedule to briskly walk from one room to the next. What we learned on the first day was that at a convention of this size, attending any event isn’t possible without serious forethought and sacrifice.

To get a seat in the Iron Man panel, for example, it just isn’t enough to like Iron Man. Everyone likes Iron Man. The 6130 people who get seats in the Iron Man panel live and breathe Iron Man. They paid for convention passes, plane tickets, and overpriced hotel rooms and will plant themselves outside in a crowded and smelly line for eight hours just to see Robert Downey Jr. sit next to Jon Favreau. Unless you can match the dedication and fanaticism of the 6130th craziest member of the fanbase, you don’t stand a chance of getting a seat in their panel.

## Joss Whedon’s drunken signature had the power to upgrade our Comic-Con passes to priceless geek treasures.

So when we decided on the second day of Comic-Con not to give up on our most anticipated block of panels — actors, creators, and writers of the television shows *Community*, *Legend of Korra*, and *Firefly*, which would occur in immediate succession in Ballroom 20 on Friday morning — we knew we couldn’t do it half-heartedly. And that’s why two students from Cambridge, MA, got off the bus outside the San Diego Convention Center at 1:30 a.m., nearly eight hours before the start of the first panel.

The line began at the front doors of the convention center and extended well beyond our visual range, the end of it seemingly hidden by the curvature of the Earth. We were greeted by the tired stares of fans in the very front of the line, most of whom were equipped with a sleeping bag and the distinctive orange-yellow beanie known as a “Jayne hat” — named for the gruff character who sports one in *Firefly*.

We had barely started our trek to the back of the line when we noticed an incredibly loud and dense swarm of people on the sidewalk, the kind of swarm that only surrounds an unthinkable famous nucleus.

That nucleus was a moderately inebriated Joss Whedon, creator of *Firefly* (and, more recently, director of *The Avengers*). His drunken signature had the power to upgrade our Comic-Con passes from mildly interesting souvenirs to priceless geek treasures.

Neither of us had thought to bring a Sharpie, and for several gut-wrenching moments we ripped apart our bags looking for one as the Joss horde slowly drifted away. A girl wearing a Jayne hat emerged from the swarm, adorned with a signed Comic-Con badge, and shoved her marker into my hand. Minutes later, I was ejected from the Whedon swarm myself, somehow clutching the prized signature. The girl who gave us her marker was long gone, lost in a sea of Jayne hats.

We walked down the line in a daze, leaving Joss Whedon to be engulfed by a still-growing mass of fans. Half a mile and some 750 people later, we collapsed at the line’s end. Surrounding us were others who had made the same journey through the Joss Whedon swarm, and had the signed badges to show for it. We made polite conversation for a while, and when our neighbor offered us a spot on the blanket he had stolen from his hotel, we gladly shifted off the pavement.

I was beginning to contemplate a nap when a rumor propagated down the entire line in what could only have been seconds: Joss Whedon was still at Comic-Con, and he was making his way down the line. Towards us.

Before that signal reached us, we were the reasonable, sophisticated segment of the line. The segment that showed up only eight hours early and didn’t even bring sleeping bags. The segment that had so far maintained a level of cool composure in an inarguably nerdy situation. Once that signal reached us, however, it was clear that no one was going to be able to hide their inner dork for much longer. The social barriers of awkward politeness vanished and the line disintegrated into a sparse cloud of excited scheming. Complex networks of agreements were laid out to ensure everyone would get a decent photo with Drunken Joss.

*Firefly* merchandise was prepared, Sharpies were distributed. When Joss Whedon arrived, the group of strangers at the corner of Harbor Drive and Chavez Parkway was ready.

## We couldn’t see the stage as well from here, but our line faction had been preserved for just a little longer.

As the dust settled and the line began to regain its structure, it was clear that the nine of us were now a sort of unified faction. Sharing such a raw moment of hero worship will do that to a group of people. And what a group it was: the Texan who was providing his stolen blanket and a bag of endless rations; a software developer and blog writer from Arizona; a married couple from the Midwest who were already planning another all-nighter for the *Dr. Who* panel; an aeronautical engineer from Maryland; an emergency room nurse who clocked Joss Whedon’s blood alcohol content at 1.2; the lead singer of a heavy metal band who we jokingly called by his stage name, “Michael Diamond” ... and us, a pair of MIT students.

Consider how rare it is to converse at length with someone who is outside of your age group, field of work, and region. Interacting with such a diverse set of people was surreal. Food was shared, convention merchandise was compared, line-cutters were warded off, and the Joss Whedon encounter was relived dozens of times. Frequent journeys to the Starbucks three blocks away were made in teams. Six hours later, the line started to move. The movies and books we had packed “in case of boredom” remained untouched.

In order to manage a line of this scale, the Comic-Con coordinators had devised a convoluted route twisting through and around the entire convention center and ending at our final destination: Ballroom 20. It was a slow two-mile trek through an infinite labyrinth of belt barriers. Occasionally we’d trudge past other lines, consisting of a completely different breed of fans who had been waiting for

hours for their respective subculture. Even from my perch in the *Firefly* line, it was hard not to view them as... crazy. By 7 a.m., however, the incredulous stares from the newly-arrived convention-goers suggested that we were no less crazy. We had been waiting all night for the sake of a science fiction show that had been off the air for ten years! But surrounded by other *Firefly* fanatics, the ordeal just didn’t feel unreasonable. Is this what it feels like to be part of a cult?

When the doors to Ballroom 20 opened and the fragile *Firefly* line finally denatured, our good position in line offered each of us the opportunity to run for one of the lone empty seats near the very front of the impossibly large room — the seats we had dreamed of when we got in line eight hours earlier. None of us ran. Instead, we chose a cluster of nine empty seats in the middle of the room. We couldn’t see the stage as well from here, but our line faction had been preserved for just a little longer.

These days, all of the panels at Comic-Con can be watched online, and most of the merchandise can be purchased more cheaply from Amazon. Every inch of the convention hall is tweeted several times over. So what’s the point of attending Comic-Con in 2012? I don’t think I understood the answer to this question myself until I attended the *Firefly* panel. Comic-con is 130,000 people caring enough about something to bring their real life to a halt for four days. It’s 4,908 *Firefly* fans simultaneously losing their minds, bursting out of their chairs and screaming as loudly as they possibly can because Joss Whedon has joined the cast of *Firefly* on stage. It’s nine people from all over the country who were strangers just hours before, opting for mediocre seats together over incredible seats apart. That’s a convention worth sitting on the pavement for.



Cast and creators of *Firefly* speak to fans at San Diego Comic-Con 2012.

A girl awaits the *Firefly* reunion panel at Comic-Con, wearing a distinctive “Jayne” hat from the show.



Leaving San Diego Comic-Con was like leaving Disneyland as a kid; I had the same feeling in my gut. You don’t want to leave such a magical place, and as you see the convention center recede in the distance you really feel like you’re missing something.

Walking around in the days after SDCC, I would accidentally spot people in costume out of the corner of my eye. I would turn to see what they were dressed as, but they were not in costume at all. I was confused that I could walk without getting shoved on all sides. And why weren’t people wearing their badges all the time? San Diego Comic-Con is an incredible event, and something every nerd should experience at least once.

To learn more about Comic-Con and preregistration for next year you can visit the official website at <http://www.comic-con.org/ci/index.php>. There’s also a nifty documentary where you can learn more about the cultural phenomenon. Search Amazon or Netflix for *Comic-Con IV: A Fan’s Hope*. It’s co-produced by Joss Whedon!

If you do decide to go, we have one piece of advice: PLAN! You will not regret it.







# Planning Board rejects Novartis courtyard proposal

*Board raised concerns about gated courtyard, slope of ramps, and fencing's proximity to street*

**By John A. Hawkinson**  
*STAFF REPORTER*

On July 17, the Cambridge Planning Board reviewed Novartis' plans for fencing its public access courtyard at the new Novartis campus. The board rejected the plans due to concerns over the courtyard security, requiring Novartis to come back with a new proposal.

**Concerns were also raised about whether the area was inviting, and how the public would know they were entitled to use the space.**

The new Novartis campus on the east side of Massachusetts Avenue will be 50 percent devoted to a public green courtyard, as a condition of the zoning petition that allows some parts of the new campus to reach 125 feet in height, as well as other miscellaneous zoning relief. The courtyard is designed by Michael Van Valkenburgh Associates, a landscape architecture firm.

The board was concerned that there would be no public access to the courtyard on weekends or evenings, the times when members of the public with 9 - 5 jobs might want to use the space. Some members questioned the necessity of gating the area; Novartis is concerned about the security of their scientists in the face of potential

protests.

Concerns were also raised about whether the area was inviting, and how the public would know they were entitled to use the space. (The board's inquiry about signage was in response to a query from *The Tech*.)

The new campus, located at 181-211 Mass. Ave., is currently under construction and is expected to be finished next year.

The existing Novartis campus west of Mass. Ave. has a smaller, stone courtyard available for public use during business hours, but almost no one knows about it. With its black wrought iron fencing, it cannot really be considered inviting.

When the planning board approved Novartis' zoning petition for the new campus, it attached a condition requiring Novartis to present its plans for courtyard security measures to the planning board.

In addition to the policy concerns about the courtyard, the board also raised technical questions, such as about the slope of ramps. It also noted that ramps exceeding five percent grade would require railings, but observed that those rails were not pictured in Novartis' renderings.

The board asked Novartis to try to redesign the walkways to not require railings. The board also asked Novartis if the fencing could be further back from the streets.

A copy of Novartis' submission to the planning board is available at <http://tech.mit.edu/V132/N30/novartis/>. It offers views of the campus from the streets with the fencing open as well as with the fencing closed.



SOURCE: NOVARTIS/MICHAEL VAN VALKENBURGH

**Novartis' new campus on the east side of Massachusetts Avenue will have a green public courtyard; the planning board rejected their proposal for a gate that is open during the day (top) and closed at night (bottom).**

Stay connected between the issues with campus news over the summer

➔ **Blogs @ The Tech**  
<http://techblogs.mit.edu>

➔ **The Tech's Facebook Page**  
<http://facebook.com/themittech>

➔ **The Tech's Twitter Feed**  
<http://twitter.com/thetech>





# Institute Double Take

By David Da He  
STAFF PHOTOGRAPHER

The foot traffic in Lobby 7 is captured in a long exposure as people enter from 77 Mass. Ave. The time of sunset is chosen so that sunlight floods the background. Black and white is used to provide contrast to the photo.

**Aperture:**  
f/11  
**Exposure Time:**  
2.5 sec.  
**Sensitivity:**  
ISO 100  
**Effective Focal Length:**  
27 mm

# Sloan Beehive nurtures start-ups on MIT campus

Beehive, from Page 1

“Feed Honey” was quickly modified to “Need Money.”

Of the 40 teams, approximately 10 split their time with MassChallenge, the world’s largest global start-up competition. About 15 teams, of two to three people each, are in the office at a given time.

Since each team is so busy, GeckoCAP’s Steven Chiu says, “There’s a lot of great teams...but it’s a little hard to socialize.” Still, “it’s inspiring to know there are others as crazy as us,” says Rallyt’s George Elfond.

Wednesday night happy hours and biweekly brainstorming “IdeaStorm” sessions on Fridays bring the groups together. A guest lecture series featuring investors, lawyers, and entrepreneurs helped teams refine their products.

Early stage investors helped Chiu and GeckoCAP gauge excitement for the product. Additionally, Cohen mentions that teams were able to “offload a lot of questions and concerns” on a member of MIT start-up Locu.

In addition, each week, one team is appointed as the “Ambassador of Fun” and is responsible for hosting at least one morale-boosting event, says Cohen.

Additionally, a lot of the advice is given informally.

When Super PAC App’s Dan Siegel MBA ’12 wanted to open a company bank account, “everyone made time” in the Beehive office to weigh the pros and cons of each option and by the end of the afternoon, he “knew for sure” which one to choose. In another example, since “neither of us knew where coders hung,” other teams gave Chiu and the GeckoCAP team advice about how to contact programmers.

Cohen hopes that his initial class of companies will share a “sort of fraternity that will last.” Throughout the summer, he witnessed new levels of collaboration.

As an entrepreneur, you feel your “idea so unique that if you articulate your idea, you’re afraid it will be stolen... and hold ideas fairly close to the chest,” Cohen says.

Yet, in order to progress, companies must reconcile this paradigm in the early stage of a venture. The Beehive companies became more comfortable with sharing their ideas through the summer.

As for next summer’s companies, a new Beehive location is needed as the Sloan space is redirected. Though the Beehive is already viewed as a success in the

eyes of the Trust Center, Cohen says “everything has its start... and my successor will undoubtedly take the hive to that next level.” He thinks the Beehive will continue to evolve to best fit the needs of the Trust Center and greater MIT community.

Cohen will give advice to the next Beehive managing director as he pursues his own start-up next summer. Audiocommon will allow musicians to access tools typically available only in the recording studio, saving time in the recording pipeline.

**Cohen hopes that his initial class of companies will share a ‘sort of fraternity that will last.’**

“As people, our need to create is very inherent,” says Cohen who views entrepreneurship as an “academic major agnostic lifestyle.”

Whether you’re a chemical engineer, Course 6 or an English major, entrepreneurship is about finding problems and fixing those problems, he says.

## Super PAC App

Over \$300 million has been raised and spent by super PACs already in 2012, leaving voters with a dizzying array of media messages and intentions.

Enter Siegel, Jennifer Hollett and their new Super PAC App expected to be available Aug. 20. Users of the free app can simply hold up their iPhone to a television screen to instantly learn the political leanings and total expenditures of the super PAC, organization, or official campaign funding the advertisement. The app also allows users to check a commercial’s claims by linking to related third party sources like *opensecrets.com* which reveals political spending. Users can then rate the overall commercial and view their friends’ ratings via Facebook and Twitter.

The app evolved from a final project for a Media Lab class focusing on situations involving multiple media screens (television, computer etc.) with related content in which Siegel and Hollett, a Harvard Kennedy School graduate were enrolled. Excitement from the Media Lab and the Trust Center and a grant from the Knight Foundation, which funds innovation in journal-

ism, allowed them to “take the app from a concept and class project to a company building a real application” says Siegel. He also describes their summer stint at the Beehive as “another example of MIT letting us stand on its shoulders.”

The summer has been busy. The team recruited start-up guru and iPhone app developer Bob Caslin. They are also assembling the MP3 audio file database which is required so that the app can uniquely identify every campaign ad using TuneSat audio fingerprinting technology. About 90 percent of these files can be obtained from Youtube channels or websites by webcrawlers. For those not yet put up online, the team must rely on a network of journalists and other sources.

Siegel wants to ensure the app is something “people will care to use,” especially in the swing states. The team will be attending both the Democratic and Republican National Convention. Additionally, about 10 people each in many of the swing states have been generating awareness about and responses to the app. For example, previous feedback led to a “parting of the clouds moment” that changed the way some of the buttons were placed on the app, explains Siegel.

Post-election, SuperPAC App also plans to analyze the 2012 election data as one of the relatively few companies in this sphere. A University of Pennsylvania International Relations graduate and Toronto native respectively, Siegel and Hollett are exploring ways to expand the app for different countries and elections. The app could also be extended to check claims on any product based commercial. As for 2016, Siegel leaves plans open.

“2016? We could be flying in cars by then.”

## GeckoCap

Asthma is the number one chronic children’s disease and primary cause for child hospitalizations and for missing school. Yet, don’t fear.

Operating under the motto “Simple Asthma Management,” the GeckoCap team aims to reduce preventable asthma attacks and hospitalizations. Founded Michael Chiu PhD ’97 and Israeli doctor Yechiel Engelhard MBA ’12, GeckoCap will encourage better adherence to recommended dosages and better monitoring of asthma symptoms — two small ways to make a huge difference.

The green cap fits over a child’s current everyday maintenance in-

haler and glows when a child needs to take their medication so that they will not forget even if symptoms aren’t flaring up. The GeckoCap also fits over a child’s rescue inhaler. The small device can notify parents via a mobile device if the child has not taken their medicine.

“That way, I’m more aware and can respond in a timely manner,” says Chiu, the parent of a nine-year-old with asthma.

Additionally, all the inhaler usage data is uploaded to a cloud and can be sent to the child’s physician who previously only relied on self-reported accounts. Such data, both in individual and in aggregate, can provide better diagnoses and tracking.

The idea sprung out of the Media Lab’s New Media Medicine Hackathon where GeckoCap took first place. They both became enamored with the asthma project. They developed a prototype and were semifinalists in the MIT 100K competition. They also recently placed first in the Boston Beta competition for health and biotech start-ups. Both former students of Bill Aulet, the managing director of the Trust Center, the pair is now pursuing the project full time in their river-view Beehive office this summer.

**About 10 people each in many of the swing states have been generating awareness about Super Pac App.**

With the help of Course 6 undergraduates Louis Sobel ’14 and Tal Tchwelli ’14, Yechiel says this summer the team has been working on building a robust back end and a mobile app. With plans to get a product on the market sometime next year, the team is also contacting different psychologists and hospitals for product feedback and developing their fundraising pitch.

## Rallyt

The basic premise of Rallyt is that organizing has not made the technological leap that other industries, such as retail or travel have. “Amazon started as nothing but Barnes and Noble on a website,” says Eugene Feldman, one of the three founders of Rallyt.

“However, Facebook and Groupon could have never existed offline,” he continues. By leveraging the transformational power of the

Internet, Rallyt hopes to help individuals organize through a web platform by providing unique tools to achieve social change.

Many traditional organizers have embraced social networking tools, such as Facebook and Twitter. Yet, they quickly realized that these tools were great for sharing but not for coordinating actions like protesting or contacting journalists.

“We heard from many organizers over and over that Facebook groups [work] mostly to invite people to events — they are not effective for anything else organizers do,” says founder Mykhaylo Kostandov.

“In addition, most of our Facebook friends are not really our friends — they are our colleagues, classmates and random acquaintances. It’s hard to post political causes if you’re working for Chevron in Texas and you’re voting for Barack Obama or at Google in Silicon Valley and plan to support Mitt Romney for that matter,” says Feldman.

Co-founder Elfond describes the range of purposes Rallyt could help coordinate, from completing actions ranging from sending a petition to town hall when a tree falls on a neighborhood sidewalk all the way to helping overthrow oppressive dictators.

The founders were partly influenced by the lack of attention given to police brutality against the oil worker protests in Kazakhstan in November of last year. Elfond believes a site like Rallyt would make “the potential oppressors be concerned about the world opinion and thus not feel like they can brutally crack down on their people.”

Based in Cambridge, the team has benefited from access to a range of academic advisors at MIT and Harvard. All three co-founders have met more than 10 years ago and have worked together on a range of projects.

“[Without the Beehive], we could have been in a garage in Los Angeles,” says Feldman.

Yet now the team is putting finishing touches on their interface for a private beta in October with several organizations that will be early adopters. There is a lot of interest in a better organizing infrastructure for non profits, but the October private beta release will only be open to 3 – 5 diverse organizations.

“Only the companies that are embracing an important social purpose and are willing to adopt new technologies for that will be selected,” concludes Elfond.



# City Council will wait a week to approve for 300 Mass. Ave; wants to preserve affordable housing in negotiation

By John A. Hawkinson  
STAFF REPORTER

MIT and Forest City, the developers of University Park, are poised to receive approval to construct a new life sciences building at 300 Massachusetts Avenue, immediately north of Random Hall.

In a surprise move on Monday, Cambridge Mayor Henrietta Davis rescheduled the city council's discussion and vote to next Monday, Aug. 6.

The new building will demolish most of the block, from the long-shuttered Cambridgeport Saloon, through Thailand Cafe and up to All Asia, and construct a seven-story new building for Millennium Pharmaceuticals. Millennium will lease the building for fifteen years.

Random Hall will remain untouched, as will the gas station and the New England School of English dormitory behind Random facing Green Street. Demolition could start late this year, if the proposal is approved.

Although MIT owns much of the property for the proposed development, it has been silent in the zoning amendment process. Forest City Enterprises has leased MIT's land for purposes of this building, and has also leased the remainder of the block that is owned by the Hollisian family. It is Forest City that has brought its proposals before Cambridge's planning board and city council.

Local resident opposition

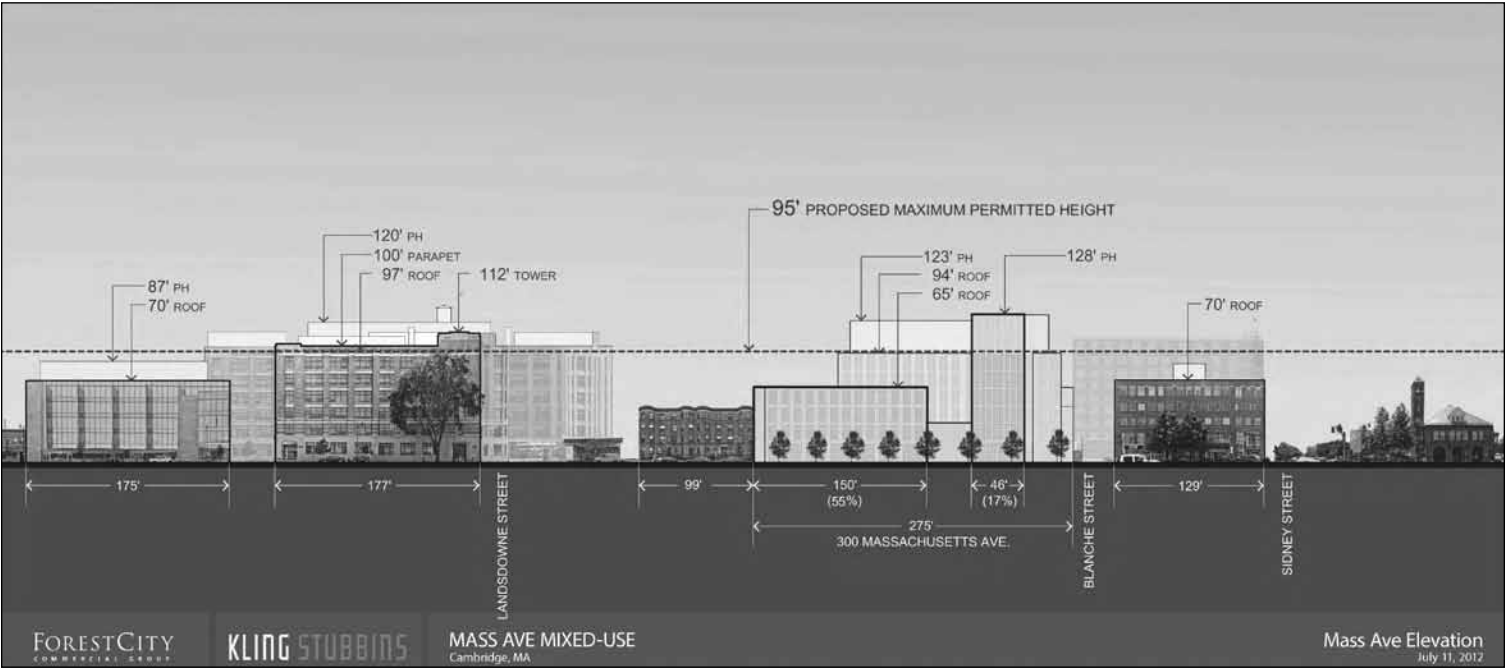
There has been substantial community opposition to the building proposal from local residents; Forest City is seeking a number of zoning changes, like allowing more height and building in more square feet than is currently allowed.

If built without either a special permit from the planning board or a zoning change from the city council, the building would be limited to 139,000 square feet, and to 65 feet in height of occupied space (with additional mechanical penthouses and rooftop mechanicals that are not in the regulation). With a special permit from the planning board, the building could go to 80 feet of occupied height. Forest City seeks a zoning change that gives them an additional 108,000 square feet, for a total of 247,000 square feet, and 94 feet of occupied height.

According to Forest City, the penthouse of the building would reach up to 128 feet high, with most portions at 123 feet. By comparison, the Novartis building to the south (the former NECCO factory) has a 97 foot roof and a 120 foot penthouse.

Community opposition has centered around the height and the lack of housing associated with the proposal. Local residents are concerned that Forest City is not proposing to build housing, and also that they wish to exceed the allowable height for the parcel, which was set during a hard-won zoning fight decades ago.

But Forest City's original proposal for the building, in December 2010, requested no increase in height — it was the full 80 feet that the planning board can grant. But the planning



Forest City's proposed building at 300 Massachusetts Avenue would rise to 128 feet at its tallest penthouse, eight feet taller than the penthouse on the Novartis building, a block to the south. 300 Mass. Ave. will have a variety of different heights, with including a lower 65-foot section adjacent to Random Hall, a 94-foot section for most of the width (with a 123-foot penthouse), and a 128-foot tower section. Rooftop mechanicals would be above these heights.

board, in 2011, asked Forest City to adjust their design to add articulation: making some parts of the building taller and some shorter. They did so.

The planning board also asked Forest City to work with the city's Community Development department to add housing. Forest City came back this year with a proposal that included a 14-story residential building near the firehouse. But local residents expressed concern that the proposed building would cast shadows on Jill Brown Rhone Park in Lafayette Square. As a result, the city council amended the proposal on June 11 to remove the housing.

Forest City's proposal also includes a \$1.1 million "community benefit" contribution to the city, contingent on the building being built. They have also committed to ground floor retail, and have hired the same retail consultant who led to Flour and Central Bottle at Novartis, two blocks south. They will have about three times much retail space as Novartis now has.

Monday's council meeting

The city council typically meets only once over the summer, and about thirty protesters stood in front of City Hall with large signs prior to the meeting, which ended up lasting six hours.

About 100 people had signed up to speak at the public comment portion of the meeting. Comments are limited to three minutes, suggesting as much as five hours of public comment.

But at the beginning of the meeting, Mayor Henrietta Davis announced that the Forest City petition would be postponed for one week until a special meeting of the City Council at 7:30 p.m. on Monday, Aug. 6. She was loudly booed and derided by many members of the crowd, who filled the city council chambers.

Many people who had planned to speak left, but public comment still lasted three-and-a-half-hours.



Susan Yanow, of the Area 4 Neighborhood Coaliton, protests the further development of Central Square on Monday in front of City Hall. Other protesters held signs with "Don't Kendalize Central" and "No Permit 4 Forest City" written. Yanow is the author of a "downzoning" petition to institute a development moratorium in the area.

Two-and-a-half hours into public comment, Cambridge resident Cathy Hoffmann demanded an explanation for the mayor's actions, expressing the palpable frustration of the room: that many residents had invested a lot of effort to be present at the meeting, including rearranging vacation plans. Hoffman stated her intention to not leave the microphone until Davis explained. Scores of residents rose to their feet in her support.

After a contentious discussion and a brief recess, the council voted to suspend the rules and allow the mayor to respond during the public

comment portion of the meeting.

Davis explained that the delay was about housing. About 150 units of affordable housing within University Park are threatened with expiry, meaning they will no longer be reserved for affordable housing, Davis said.

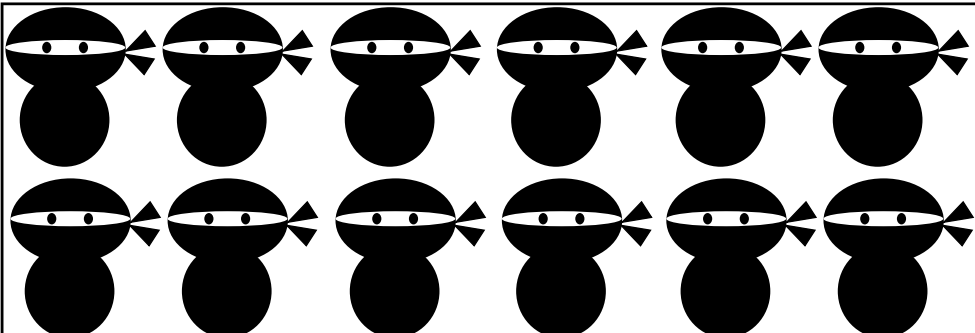
Davis and the council became aware of this issue late last week, and "it suddenly became an opportunity in the negotiations/discussions around the Forest City petition," Davis said.

As a result, Davis unilaterally chose to defer consideration of the Forest City petition until a special

meeting next week.

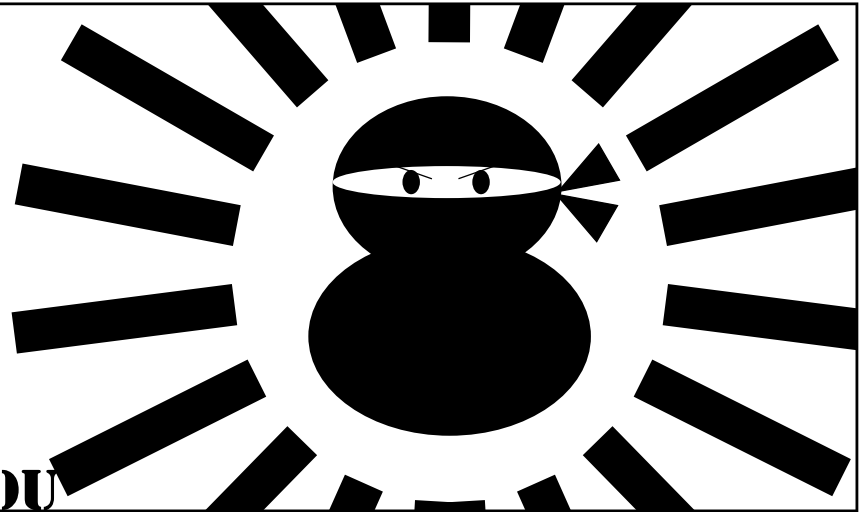
Davis had no response to why there was no advance notice of the change to the meeting's agenda.

In many ways, the lack of notice and transparency has been typical of the city council's process on this petition. There was no advance notice that the housing tower would be removed from the proposal by the council in June. At an ordinance committee meeting on July 25, Forest City presented additional materials that had not been seen prior to the meeting, causing confusion among some members of the council and the public.



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# Lottery officials knew about Cash WinFall’s flaws

## Gambling syndicates included MIT students; spent over \$40 million in seven years

By Andrea Estes  
THE BOSTON GLOBE

Massachusetts State Lottery officials knew for years that a small group of gambling syndicates had virtually taken over a game called Cash WinFall — winning most of the prizes during high payoff periods — but did nothing about it until the *Globe* began investigating, according to state Inspector General Gregory W. Sullivan.

Sullivan’s report details the way a handful of math and science wizards, including Massachusetts Institute of Technology undergraduates looking for an interesting school project, turned Cash WinFall into a nearly fulltime business, spending \$40 million on tickets over a seven-year period and winning an estimated \$48 million.

### MIT undergrads turned Cash WinFall into a nearly fulltime business.

And lottery officials were happy about the huge sales to these sophisticated gamblers, bending and breaking lottery rules to allow them to buy hundreds of thousands of the \$2 tickets, Sullivan found. If anything, lottery officials were envious, with one supervisor asking in an e-mail: “How do I become part of the club when I retire?”

State Treasurer Steven Grossman, who oversees the lottery, finally stopped the game this year. On Monday, Grossman said the agency should have taken action sooner.

“I feel it is important to essentially apologize to the public because a game was created that allowed syndicates to gain special opportunities that others did not have — using machines themselves, partnership with lottery agents, using them after hours. We’re sorry some gained unfair advantage,” said Grossman, who had requested Sullivan’s investigation.

“Revenues were tremendous and the lottery benefited, but there were practices that were not appropriate and things done that were not right,” he said.

However, the inspector general recommended no further action, concluding that lottery officials got no personal benefit from the syndicates’ manipulations. He also found that ordinary gamblers still had a fair chance at winning Cash WinFall, though the syndicates reported a much higher rate of profit than ordinary gamblers.

Sullivan found that the lottery failed to manage the game or enforce the rules, but concluded the game was “a financial success for the lottery.”

The *Globe* reported last summer that a few gamblers with an extraordinary knowledge of math and probability had found a quirk in Cash WinFall shortly after it was introduced in 2004, allowing them to make an almost guaranteed profit as long as they purchased enough tickets at the right time. They figured out that, for a few days every three months or so, Cash WinFall became the most reliably lucrative lottery game in the country.

Sullivan said that these high rollers made a livelihood from playing it, giving up their day jobs to devote nearly full-time to the game, often backed by hundreds of thousands of dollars put up by investors.

The leaders of the group of MIT students stumbled on Cash WinFall as part of a college research project. James M. Harvey ’05 told investigators he was looking for an interesting senior independent study subject for his final semester in 2005. He said it took only a few days to determine that during so-

called “rolldown weeks,” it was easy for large-scale bettors to win more than they lose.

Here’s why: Unlike most lottery games, the biggest prize in Cash WinFall was capped at \$2 million. If no one won the jackpot when it reached \$2 million, the jackpot was then redistributed — or “rolled down” — into the smaller prizes, making them 5 to 10 times bigger than normal. Matching 5 of the 6 numbers drawn in Cash WinFall would normally produce a \$4,000 prize, but during a rolldown week, the prize could top \$40,000.

The groups figured out that if they bought at least \$600,000 worth of tickets, the chances were excellent that they would win back 15 percent to 20 percent more than they spent. As a result, whenever the Cash WinFall jackpot got close to \$2 million, the syndicates rushed to stores to buy as many tickets as possible.

Harvey said he initially tried the game on a small scale during the Feb. 7, 2005, rolldown, winning \$3,000 from \$1,000 worth of tickets. The group’s winnings inspired other betting pools on the MIT campus, the report said, but Harvey made it large-scale, forming a company with fellow student Yuran Lu ’05. They called it Random Strategies Investments, after the dorm, Random Hall, where their plan was hatched.

Random Strategies officials spent many hours filling out betting slips and buying tickets at a few hand-picked stores, the report said, betting between \$17 and \$18 million over a seven-year period on Cash WinFall. Sullivan estimated the group earned at least \$3.5 million in profits from 2005 to 2012, though Harvey declined to disclose his group’s earnings.

Leaders of another group, GS Investment Strategies of Michigan, told investigators they typically aimed to buy around 312,000 tickets to ensure profits. On July 14, 2011, the group placed its largest bet ever, spending \$720,000 on 360,000 tickets.

### Zhang left his day job as a biomedical researcher to focus mainly on Cash WinFall in 2006.

A third group, made up of scientists at Boston University and Northeastern University, started betting in 2005 after analyzing Cash WinFall and realized the odds were in favor of large-scale bettors.

“I told everyone I met: ‘You should put more money into this game,’” said Dr. Ying Zhang, who formed the Doctor Zhang Lottery Club Limited Partnership.

He told investigators the group made steady profits from Cash WinFall from the beginning, just as his calculations had suggested. In 2006, he left his day job as a biomedical researcher to focus mainly on Cash WinFall.

The game’s vulnerability became clear in 2010, Sullivan said, when the MIT group figured out a way to win nearly the entire jackpot for a single drawing, something lottery officials had erroneously concluded was impossible.

The MIT group figured out that, if it bought enough tickets, it could push the jackpot to \$2 million and trigger the rolldown all by itself.

In August 2010, the group began quietly buying up enough tickets to force a rolldown. The lottery remained silent as the MIT group stockpiled 700,000 tickets and did not alert the public that a rolldown week was about to happen, as it normally does. The MIT group bought more than 80 percent of the tickets during the August 2010

### Inspector General’s Report on ‘MIT Group’

In January 2005, James M. Harvey was about to start his final semester at the Massachusetts Institute of Technology. Looking for an interesting independent study project for his last term, he considered a project evaluating the Lottery games Powerball and MegaMillions to determine which was more advantageous from the player’s perspective. While researching Powerball and MegaMillions, he also reviewed other Lottery games for comparison. That was when he began looking at Cash WinFall and noticed its unique “roll-down” feature.

In an interview, Mr. Harvey said that it took him only a few days to determine that it was possible to make a profit playing Cash WinFall. He did research, ran calculations and talked to friends in his MIT dorm, Random Hall.

Among other things, Mr. Harvey went to Lottery headquarters in Braintree and asked for the agency’s administrative bulletins for Cash WinFall. Although no one could locate the administrative bulletins, he was able to meet with a Lottery official who was very familiar with the technical aspects of the game. That conversation bolstered Mr. Harvey’s own analysis: during a roll-down, each ticket is worth more than it costs.

Back at Random Hall, Mr. Harvey embarked on two projects: drumming up interest in a party to watch the Feb. 6 Super Bowl and organizing a betting pool to play the next Cash WinFall roll-down, which he expected to occur the next day – Feb. 7. He didn’t generate much enthusiasm for watching the New England Patriots play for the championship, but his analysis of Cash WinFall had broader appeal. About 50 people each put \$20 into Mr. Harvey’s lottery pool for the Feb. 7, 2005 roll-down.

Mr. Harvey and members of the MIT group bought 500 tickets at nearby retailers. One of those tickets matched four of the six winning numbers, paying \$2,364. Together with some three out of six matches, Mr. Harvey’s group had turned \$1,000 into about \$3,000.

When Mr. Harvey and a fellow MIT alumnus, Yuran Lu, incorporated their betting enterprise in 2010, they named it Random Strategies Investments LLC in honor of the dorm where the Cash WinFall plan was launched.

According to Mr. Harvey, word circulated on the MIT campus about Cash WinFall and others formed similar betting pools that semester, as many as six. Other than Mr. Harvey’s, none of the MIT groups seems to have lasted very long or grown very large.

The \$3,000 in winnings from the Feb. 7, 2005 roll-down drawing remained invested in the pool for future roll-downs. Upon graduation, some members of the MIT group invested additional money in the pool. Mr. Harvey and his colleagues ramped up their ticket purchases as quickly as funds allowed, to the point where they could buy 300,000 tickets for each roll-down drawing.

Mr. Harvey said his calculations determined that in general buy-

ing about 300,000 tickets was the best strategy. However, he varied the number of tickets purchased for particular roll-downs based on several factors: the amount required to push the jackpot up to \$2 million, estimates of how much other groups would bet, and even weather forecasts. As long as the sets of numbers were chosen so that winning combinations were well distributed across the range of possible outcomes – and as long as no one hit the jackpot – Mr. Harvey could be virtually certain he and his investors would make a profit.

Even when the MIT group had enough money to purchase 300,000 tickets for a drawing, its ticket buying was limited by other factors. One constraint was simply getting enough ticket slips filled out. Mr. Harvey developed a computer program that would generate sets of numbers that would provide an optimal distribution across the range of possible drawing results. Under Lottery rules, betting slips can’t be computer generated so the group had to fill out betting slips by hand – oval by oval – to match each set of numbers generated by Mr. Harvey’s computer program. Simply filling out the betting slips was time-consuming. However, the betting slips could be reused so that once the slips had been created, Mr. Harvey and his friends did not have to repeat that part of the operation.

Another constraint was locating stores that would handle large volume purchases. Many retail outlets balked at processing tickets on the scale that the MIT group and other high-volume bettors were seeking. Handling 10,000 tickets, including scanning in the slip with the requested numbers, could easily take several hours. Many store managers objected to having a staff member monopolized for long stretches. Although retail stores make a 5 percent commission on Lottery sales, tying up a clerk for hours at the lottery terminal could interfere with other store operations.

In addition, the MIT group, like other high-volume bettors, invariably had thousands of “free bets” to redeem from prior drawings. The store clerk is required to do twice as much work to process a free bet. First, the agent must scan the earlier ticket to redeem the free bet and then scan the betting slip. In addition, the store only gets a 1 percent commission – 2 cents – on a free bet redemption because it is considered a claimed prize, not a new sale. In Mr. Harvey’s words, “it was really a grind.”

Over time, Mr. Harvey said the group found a handful of retail Lottery agents – a Texaco station and a White Hen Pantry in Belmont, a convenience store in Back Bay across the Charles River from MIT, and a Mobil station in Amesbury – that would process the group’s large orders accurately. The MIT group used these four locations over and over again.

Other factors could also slow Random Strategies down. If the weather was humid, the ticket machines were more likely to jam.

If a terminal was running low on ink, it could take several tries to redeem a winning ticket. Once, a power outage in the Belmont and Cambridge area interrupted the group’s pre-roll-down ticket buying.

Identifying the winning tickets was also time-consuming. Mr. Harvey wouldn’t describe his ticket-sorting operation in detail, saying his system was proprietary. He did reveal that he kept records showing the panels of six-number sets played in each drawing so that as soon as the numbers were announced he could quickly know how many winners the group held at each prize level. He also said he has storage boxes filled with millions of losing Cash WinFall tickets to present to auditors. Mr. Harvey said state and federal tax authorities have audited his group almost every year since they started playing Cash WinFall.

Tax compliance was also a headache for high-volume bettors. Every time Random Strategies turned in a batch of winning tickets, the Lottery generated a W-2G for every member of the group. Even small investors in the MIT group – for example, someone who won \$800 over the course of a year – would get dozens of W-2Gs every year and have to spend hours accounting for their winnings on their tax returns. The hassle prompted some people to cash out and leave the investment pool, Mr. Harvey said. The tax hassle was one reason that the MIT group, which began with 40 to 50 people, dropped to a couple dozen participants in the years after graduation and ended with 10 members at the conclusion of Cash WinFall earlier this year.

For Mr. Harvey, operating the Cash WinFall investment pool was a nearly full-time occupation during the group’s seven-year participation in the game. It also involved substantial time commitments from two or three other members of the MIT group. Mr. Harvey did other engineering projects on the side when his schedule permitted, but refining the calculations, filling out betting slips, organizing ticket purchases, claiming prizes and keeping track of the group’s business records was time-consuming work.

It was also a lucrative enterprise. Mr. Harvey said the MIT group wagered between \$17 million and \$18 million on Cash WinFall. He declined to disclose what its profits were. The OIG estimated that the MIT group made at least \$3.5 million before taxes, assuming that it had profits before taxes of a minimum of 20 percent during its seven-year participation in the game.

The rewards of his participation in Cash WinFall have not dramatically changed Mr. Harvey’s lifestyle. Mr. Harvey said that when he began playing Cash WinFall, his car was a 1995 Chevrolet Corsica which he had purchased for \$500 at a government auction. As the MIT group became successful at Cash WinFall, he upgraded his ride to a high-mileage 1999 Nissan Altima.

rolldown, Sullivan found, and ultimately cashed in 860 of 983 winning tickets of \$600 or more.

Lottery officials previously told the *Globe* that they had no way of knowing what the MIT group was up to, but Sullivan concluded that was untrue. He found that the lottery knew the MIT group was buying up hundreds of thousands of tickets, because the lottery had to approve extra ticket sales for the stores the MIT group frequented.

The lottery’s finance department, which approved the extra sales, failed to notify other lottery employees whose job was to predict jackpots for the public.

The inspector general faulted the lottery for not notifying the public, noting that the agency had been

caught off-guard by the MIT group — even though the group had been preparing for a forced rolldown for years before it carried one out.

Sullivan concluded the lottery was aware of the gamblers’ activities as far back as 2005 and cracked down only after officials feared negative publicity.

For instance, in April 2010, compliance officer John Marino visited the two Western Massachusetts stores where the Michigan group routinely spent hundreds of thousands of dollars during rolldowns — and found no problems.

“Everything is very organized and runs smoothly,” wrote Marino, who mentioned that the owners of both stores were part of the Michigan betting club. The lottery even

placed a second Cash WinFall machine at both Billy’s Beverage of Sunderland and Jerry’s Place in South Deerfield, allowing the gamblers to process more bets faster.

After the *Globe* reported on the syndicates’ takeover of Cash WinFall last July, Grossman disciplined the owners of the two stores that had allowed the Michigan group to run the ticket machines themselves, and restricted the number of tickets any store could sell in a day, essentially ending the groups’ dominance. The game was phased out earlier this year.

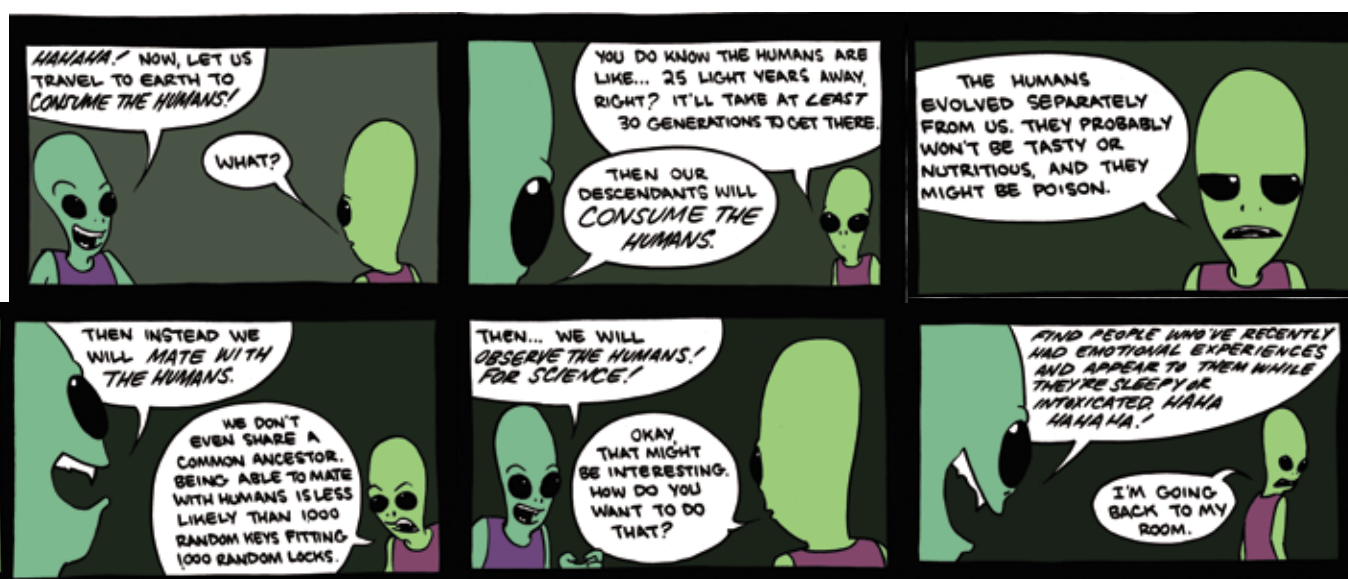
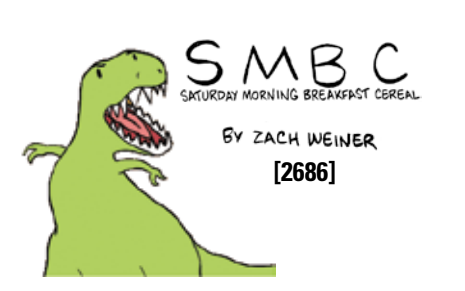
“I see this as a teachable moment, to send a message to our customers that the integrity of the lottery is of paramount importance,” said Grossman.



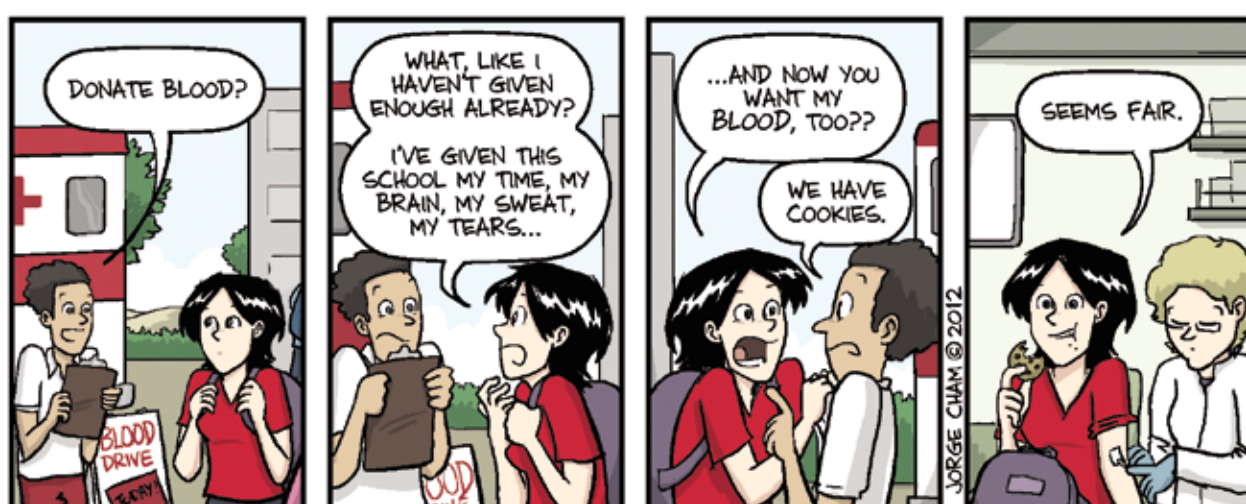




# Uppercut by Steven Sullivan



by Jorge Cham



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# Sudoku II

Solution, page 20

			5				2	1
			4			9		
	1		7	2		6	4	5
	4		2	1			9	
				3				
	2			4	5		3	
3	6	5		9	2		1	
		1			6			
2	7				4			

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.

# Techdoku II

Solution, page 20

20+			8x		
1-		160x			6x
	5x		3		
4		12x	180x		6x
2-					
	144x				5

Instructions: Fill in the grid so that each column and row contains exactly one of each of the numbers 1–6. Follow the mathematical operations for each box.



SPORTS SHORT

Stephen Young '09 named to 2012 World Rowing Championship team

Former MIT heavyweight crew coxswain Stephen Young '09 will represent the United States at the 2012 World Rowing Championships which will be held from Aug. 15 to 19 in Plovdiv, Bulgaria. This will be Young's second time coxing at the World Rowing Championships. Last year in Lake Karapiro, New Zealand, he raced in the men's coxed pair and in the lightweight men's eight.

In 2009, Young steered the MIT heavyweight men to their best season in recent history, helping the crew defeat Princeton University for the first time since 1975. This year, Young will cox Justin Stangel and Blaise Didier as they attempt to win the U.S.'s first medal in the coxed pair since 2009. The trio will likely face strong crews from Australia, Canada, Germany, and Italy, all medalists in the event from the previous two World Rowing Championships.

—Lucas Goodman

US women's gymnastics: Gold  
As of Tuesday, US second to China in the medal count

By Sarah Weir  
SPORTS EDITOR

The 2012 London Olympics officially started on Friday with a quirky opening ceremony which included the Queen jumping out of a helicopter and lots of corgis.

Saturday kicked off the Games with the men's road race. Great Britain's team was expected to shine as it included sprinter Mark Cavendish and Tour de France winner Bradley Wiggins. Along with Great Britain, the U.S. was also in good position to medal as Timmy Duggan and Tejay Van Garderen tried to lead 22-year-old Taylor Phinney to gold. Swiss rider Fabian Cancellara was also in medal contention until he crashed and injured his right shoulder during Saturday's race.

The favored riders remained in the peloton for the majority of the race, expecting to eventually catch up to the lead breakaways. In a surprising turn, they never made it. An early breakaway remained at the front up until the end. Alexandr Vinokurov from Kazakhstan won gold, Colombian Rigoberto Urán Urán earned silver, and Alexander Kristoff from Norway edged out Phinney to win the bronze.

The upcoming races will likely be even more interesting as these riders try to take back their titles.

The U.S. continues to dominate this Olympics in the pool. However, this year's story differs from when Michael Phelps dominated basically everything in Beijing.

On Tuesday morning, Phelps needed one more medal to become the most decorated Olympian of all time. He barely missed the podium in the 400 meter individual medley, earning fourth place while teammate Ryan Lochte won the gold. However, he was part of the men's 4x100 meter freestyle relay that won the silver medal after a late comeback by France's Yannick Agnel stole the U.S.'s glory. Phelps isn't looking to repeat what he did in Beijing, but after earning silver in the 200 meter butterfly and gold in his final event, the 4x200 meter freestyle relay, he has made history.

Lochte was expected to stun Phelps and the rest of the competition at these Olympics. He has won two gold medals so far, but could not fend off France's Agnel in the last leg of the 4x100 relay, and only got fourth place in the 200 meter freestyle. Lochte still has two events to prove

himself, but even after building up a huge fan base and making it this far, he's still no Michael Phelps.

For the first time since 1996, the U.S. women's gymnastics team has won gold in the team competition. Russia and Romania earned silver and bronze, respectively. China, the gold-medal winners from the Beijing Olympics, only earned fourth place in Tuesday's team final. Russia made some serious mistakes in their floor exercises immediately before the U.S. had to compete in that event, which gave the girls some confidence.

Gabrielle Douglas, Jordyn Wieber, and Alexandra Raisman competed for the U.S., each delivering solid performances. Before they even finished, it was clear that the U.S. would win gold. Next up for the women's team is the individual all-around event, which Shawn Johnson won in Beijing. Douglas and Raisman will compete for gold on Thursday, with Douglas expected to take home the gold.

As of Tuesday, the U.S. is second to China in the medal count. Both countries have 23 medals, but China has 13 gold medals to U.S.'s 9. Look out for more swimming, gymnastics, and cycling as the games continue into August.



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**Solution to Sudoku I**  
from page 18

5	9	8	2	4	6	1	3	7
3	4	2	7	1	5	9	6	8
6	7	1	3	8	9	5	4	2
9	5	4	1	2	7	3	8	6
8	6	7	5	9	3	4	2	1
1	2	3	4	6	8	7	5	9
7	3	9	8	5	2	6	1	4
2	1	5	6	7	4	8	9	3
4	8	6	9	3	1	2	7	5

**Solution to Techdoku I**  
from page 18

2	1	4	6	3	5
3	2	5	1	4	6
6	5	2	4	1	3
1	6	3	5	2	4
5	4	1	3	6	2
4	3	6	2	5	1

**Solution to Crossword**  
from page 18

HARD	ASPS	HOST
ELEE	CHUM	AORTA
ROTC	COLA	STEAM
ONION	ROLL	ODORS
SEEOU	LENO	
	DEES	DEGREE
WASPS	VANE	BOAR
ASTI	MELON	USSR
GAIT	IRON	KNEES
SPRAWL	NOSE	
	BIDS	CYCLES
SCORN	TACOS	SHELL
CAGED	ECHO	EAVE
ARRAY	WHAT	EPEE
NEED	SETS	PSST

**Solution to Sudoku II**  
from page 19

7	3	4	5	6	9	8	2	1
6	5	2	4	8	1	9	7	3
8	1	9	7	2	3	6	4	5
5	4	3	2	1	8	7	9	6
1	8	6	9	3	7	2	5	4
9	2	7	6	4	5	1	3	8
3	6	5	8	9	2	4	1	7
4	9	1	3	7	6	5	8	2
2	7	8	1	5	4	3	6	9

**Solution to Techdoku II**  
from page 19

6	3	5	1	2	4
3	6	2	4	5	1
2	5	1	3	4	6
4	1	3	5	6	2
5	2	4	6	1	3
1	4	6	2	3	5

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**PYOTR ILYICH TCHAIKOVSKY** (1840 – 1893)  
Manfred Symphony in B minor, Op. 58

- I. Lento lugubre
- II. Vivace con spirito
- III. Andante con moto
- IV. Allegro con fuoco

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